

Serial Number: 10/550,951
Attorney Docket: SAWA3005/ESS

CLAIM LANGUAGE:

1. (Currently amended) A recombinant antibody having a binding activity to 2,3,4,7,8-pentachlorodibenzofuran (2,3,4,7,8-PeCDF), which comprises ~~at least one polypeptide-a variable heavy chain or a variable light chain selected from the group consisting of:~~
 - (1) ~~a variable heavy chain a polypeptide constituting the H chain variable region of monoclonal antibody Dx3860 recognizing 2,3,4,7,8 PeCDF, and having the amino acid sequence as shown in SEQ ID No. 5;~~
 - (2) ~~a variable light chain a polypeptide constituting the L chain variable region of said monoclonal antibody Dx3860, and having the amino acid sequence as shown in SEQ ID No. 6;~~
 - (3) ~~a variable heavy chain a polypeptide constituting the H chain variable region of monoclonal antibody Dx3150 recognizing 2,3,4,7,8 PeCDF, and having the amino acid sequence as shown in SEQ ID No. 7;~~
 - (4) ~~a variable light chain a polypeptide constituting the L chain variable region of said monoclonal antibody Dx3150, and having the amino acid sequence as shown in SEQ ID No. 8; and~~
 - (5) ~~a variable heavy chain polypeptides having amino acid sequences sequence as shown in any one of SEQ ID Nos. 64-67 showing not less than 95% of homology to the amino acid sequences of the above polypeptides (1)-(4), and having a binding activity to 2,3,4,7,8-PeCDF; and~~

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~~(6) polypeptides representing fragments of the above polypeptides (1)-(5), and having a binding activity to 2,3,4,7,8-PeCDF.~~

2. (Canceled)

3. (Currently amended) ~~The A recombinant antibody according to claim 1 which comprises:~~

~~a polypeptide constituting the H chain variable region of monoclonal antibody Dx3860 and having the a variable heavy chain region having the amino acid sequence as shown in SEQ ID No. 5, or a polypeptide having an amino acid sequence showing not less than 95% of homology to the amino acid sequence of the former polypeptide any one of amino acid sequences as shown in SEQ ID Nos. 64-67 and having a binding activity to 2,3,4,7,8-PeCDF; and~~

~~a variable light chain region polypeptide constituting the L chain variable region of monoclonal antibody Dx3860 and having the amino acid sequence as shown in SEQ ID No. 6, or a polypeptide having an amino acid sequence showing not less than 95% of homology to the amino acid sequence of the former polypeptide and having a binding activity to 2,3,4,7,8-PeCDF.~~

4. (Currently amended) ~~The A recombinant antibody according to claim 1 which comprises:~~

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a variable heavy chain region ~~polypeptide constituting the H chain variable region of monoclonal antibody Dx3150~~ and having the amino acid sequence as shown in SEQ ID No. 7, or a polypeptide having an amino acid sequence showing not less than 95% of homology to the amino acid sequence of the former polypeptide and having a binding activity to 2,3,4,7,8-PeCDF; and

a ~~polypeptide constituting the L chain-variable light chain region of monoclonal antibody Dx3150~~ and having the amino acid sequence as shown in SEQ ID No. 8, or a polypeptide having an amino acid sequence showing not less than 95% of homology to the amino acid sequence of the former polypeptide and having a binding activity to 2,3,4,7,8-PeCDF.

5. (Original) A DNA encoding the amino acid sequence of the recombinant antibody according to claim 1.

6. (Original) A cloning or expression vector comprising the DNA according to claim 5.

7. (Original) A transformant transformed with the cloning or expression vector according to claim 6.

8. (Currently amended) A process for preparing ~~the-a~~ recombinant antibody according to claim 1, which comprises cultivating the transformant transformed with an

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expression vector according to claim 7 in a suitable medium, and recovering the recombinant antibody from the transformant or the medium.

9. (Currently amended) A method for immunologically capturing 2,3,4,7,8-PeCDF, which comprises the use of binding of the recombinant antibody according to claim 1, to 2,3,4,7,8-PeCDF.

10. (Currently amended) A method for immunologically determining 2,3,4,7,8-PeCDF in a sample, which comprises the use of binding of the recombinant antibody according to claim 1, to 2,3,4,7,8-PeCDF.